UAA College of Engineering
University of Alaska Anchorage

UAA Professional Development Seminar Series

Arctic Facility Design Challenges: A Multi-Discipline Approach

Presented by: Matt Emerson, PE; Steve Theno, PE; Christine Swanson, PE; Eric Bridgman, PE

Arctic facilities provide unique challenges based on site location, soil conditions, outdoors temperatures, extreme weather events, available water/wastewater utilities, communications, and remote power requirements. This presentation will describe the multi-disciplinary collaborative approach to designing a facility in remote and hub communities located in the Arctic.

Matt Emerson is a Principal at PDC Engineers, with over 30 years of experience in the design and construction industry. His previous background as a carpenter and journeyman plumber informs his unique perspective on the building design and construction process. In addition to structural design his background includes equipment layout for industrial facilities, and seismic evaluation of existing structures, equipment, and systems.

Lifelong Alaskan **Steve Theno** has been a practicing professional engineering for nearly 40 years, following his earning his Bachelor of Science in Mechanical Engineering from the University of Washington. His vast experience includes positions as staff engineer, project manager, senior engineer, department head and principal with PDC, Inc. Engineers, ultimately rising to serve as their President for more than a decade.

Christine Swanson is an Alaska Registered Professional Engineer in Fire Protection Engineering and has practiced life safety and fire protection engineering for over 22 years. Her career track included Caterpillar Inc., Underwriters Laboratories Inc., Lockheed Martin, the Federal Aviation Administration, and various architectural and engineering firms from Virginia to Alaska, consulting on (among other things) U.S. military and Department of State facilities around the world.

Eric Bridgman is an integral part of PDC's electrical engineering team, with more than 8 years of experience that includes specialized power systems design, with short circuit analysis, coordination, and arc flash analysis. He has also completed specialized training with SKM software to analyze power systems. His responsibilities include the areas of engineering analysis, computer modeling, and electrical engineering design.

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11:45 am-12:24 pm
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